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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,637	09/27/2001	Gary A. Brist	219.40432X00	9725
7590 03/01/2004			EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.			PAK, SUNG H	
P.O. Box 2938			ART UNIT	
Minneapolis,, MN 55402			PAPER NUMBER	
			2874	

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,637

Applicant(s)

BRIST ET AL.

Examiner

Sung H. Pak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0901</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/15/2003 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7-8, 17-19, 21-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Wojnarowski et al (US 5,562,838).

Wojnarowski et al reference discloses an optical device with all the limitations set forth in the claims, including: a method comprising forming a trench in a substrate (Fig. 19A); providing at least one metalized surface along the trench (Fig. 19B, column 11

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lines 32-33); activating a bonding material, such as adhesive ("248", column 12 lines 18-19); having a metalized capping surface (246, column 12 lines 16-17) to bond the bonding material to the substrate such that the metalized capping surface is located over the trench having at least one metalized surface (Fig. 19C); wherein the substrate comprises a printed circuit board (column 3 lines 12-29); wherein the substrate comprises a dielectric material (column 10 lines 17-18); wherein the trench is formed by selectively removing portions of the dielectric material (column 11 lines 65-67); wherein at least one metalized surface comprises sidewall surfaces and a bottom surface of a waveguide structure (Fig. 19B); wherein the metalized capping surface on the bonding material is formed by providing the bonding material and selectively placing the metalized capping surface on the bonding material (column 12 lines 13-19); filling the trench with a material (Fig. 17A-17B); wherein the bonding material is formed on top of the trench as a top surface ("248" Fig. 19C).

Claims 1-19, 21-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Doi (US 6,539,157 B2).

Doi reference discloses an optical device with all the limitations set forth in the claims, including: a method comprising forming a trench in a printed circuit board substrate (abstract); the trench having a first side surface, a second side surface and a bottom surface (Fig.1); forming at least one surface on the first side surface, the second side surface and the bottom surface of the trench (column 4 lines 16-25); forming a capping surface ("30") on a bonding material (column 5 lines 52-60); forming

the bonding material as a top surface over the trench having at least one surface, the top surface being different than said at least one surface (column 5 lines 41-51); wherein said at least one surface comprises at least one metalized surface and said top surface comprises a separate top metalized surface, wherein the capping surface is a metalized capping surface (column 5 lines 31-60); wherein the substrate comprises a dielectric material (column 2 lines 32-49); therein the trench is formed by selectively removing portions of the printed circuit board substrate (column 4 lines 40-57); wherein the metalized capping surface on the bonding material is formed by applying a metal coating on the bonding material and selectively removing portions of the metal coating such that the metalized capping surface remains on the bonding material (column 5 lines 47-51).


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 20030035613A1 disclose hollow waveguide formed on an integrated circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday - Thursday : 6:30am-5:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SP

Sung H. Pak
Examiner
Art Unit 2874


HEMANG SANGHANI
PRIMARY EXAMINER